

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

ENTERPRISE PRODUCTS PARTNERS L.P.

(Exact name of registrant as specified in its charter)

Delaware
*(State or other jurisdiction of incorporation
or organization)*

76-0568219
(I.R.S. Employer Identification No.)

**1100 Louisiana St., Suite 1000
Houston, Texas 77002**
(Address of principal executive offices and zip code)

**EPD Unit Purchase Plan
(formerly the DEP Unit Purchase Plan)**
(Full title of the plan)

**Stephanie C. Hildebrandt
1100 Louisiana St., Suite 1000
Houston, Texas 77002
(713) 381-6500**
(Name, address and telephone number, including area code, of agent for service)

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company
(Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered (1)	Proposed maximum aggregate offering price per share (2)	Proposed maximum aggregate offering price (2)	Amount of registration fee
Common units representing limited partner interests (3)	440,879	\$42.11	\$18,565,414.69	\$2,156.00

- Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, there is also being registered such additional number of common units as may be required because of events such as recapitalizations, stock dividends, stock splits or similar transactions effected without the receipt of consideration that increases the number of outstanding common units.
- Estimated solely for the purpose of determining the amount of the registration fee in accordance with Rule 457(c) and (h) under the Securities Act of 1933, as amended and based on the average of the high and low prices of the common units as reported by the New York Stock Exchange on September 1, 2011.
- This Registration Statement on Form S-8 relates to 440,879 common units representing limited partner interests of the registrant that may be issued under the EPD Unit Purchase Plan (formerly the DEP Unit Purchase Plan) assumed by Enterprise Products Partners L.P. to participants, which plan continues to be administered by Enterprise Products Company.

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INTRODUCTORY STATEMENT

Enterprise Products Partners L.P. (the “Partnership”) is filing this registration statement on Form S-8 relating to its common units representing limited partner interests in the Partnership (“Common Units”) that may be offered and sold pursuant to the EPD Unit Purchase Plan (the “Plan”).

On September 7, 2011, pursuant to the Agreement and Plan of Merger (the “Merger Agreement”), dated as of April 28, 2011, by and among the Partnership, Enterprise Products Holdings LLC, a Delaware limited liability company, EPD MergerCo LLC, a Delaware limited liability company and a wholly owned subsidiary of the Partnership (“MergerCo”), Duncan Energy Partners L.P., a Delaware limited partnership (“Duncan”), and DEP Holdings, LLC, a Delaware limited liability company, Duncan merged with and into MergerCo, with Duncan as the surviving entity (the “Merger”). Under the terms of the Merger Agreement, all outstanding common units representing limited partner interests in Duncan (the “Duncan common units”) were cancelled and converted into the right to receive Common Units based on an exchange ratio of 1.01 Common Units per Duncan common unit.

At the effective time of the Merger, the Plan was established by amending and restating the DEP Unit Purchase Plan, originally effective as of February 11, 2010 (as amended and restated as of July 19, 2011), and the Plan being assumed by the Partnership.

PART I.
INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Note: The document(s) containing the employee benefit plan information required by Item 1 of Form S-8 and the statement of availability of registrant information and any other information required by Item 2 of Form S-8 will be sent or given to participants as specified by Rule 428 under the Securities Act of 1933, as amended (the "Securities Act"). In accordance with Rule 428 and the requirements of Part I of Form S-8, such documents are not being filed with the Securities and Exchange Commission (the "Commission") either as part of this registration statement or as prospectuses or prospectus supplements pursuant to Rule 424 under the Securities Act. The registrant shall maintain a file of such documents in accordance with the provisions of Rule 428. Upon request, the registrant shall furnish to the Commission or its staff a copy or copies of all of the documents included in such file.

PART II.
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 3. Incorporation of Documents by Reference.

Enterprise Products Partners L.P. (the "Partnership") incorporates by reference in this registration statement the following documents and information previously filed with the Commission:

1. The Partnership's Annual Report on Form 10-K for the fiscal year ended December 31, 2010, as amended by the Form 10-K/A filed on June 30, 2011;
2. The Partnership's Quarterly Reports on Form 10-Q for the quarters ended March 31, 2011 and June 30, 2011;
3. The Partnership's Current Reports on Form 8-K filed on January 6, 2011, January 13, 2011, February 23, 2011, March 15, 2011, April 29, 2011, August 10, 2011, August 12, 2011, August 16, 2011, August 22, 2011, and August 24, 2011; and
4. The description of the Partnership's common units contained in the Partnership's Registration Statement on Form 8-A/A (File No. 001-14323) as filed by the Partnership with the Commission on November 23, 2010, and any amendment or report filed for the purpose of updating that description.

All documents filed with the Securities and Exchange Commission (the "Commission") by the Partnership pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (excluding any information furnished pursuant to Item 2.02 and Item 7.01 on any Current Report on Form 8-K), subsequent to the date of this registration statement and prior to the filing of a post-effective amendment to this registration statement which indicates that all securities offered have been sold, or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of filing of such documents.

Any statement contained herein or in a document incorporated or deemed to be incorporated herein by reference shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement contained herein or in any subsequently filed document that also is, or is deemed to be, incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Item 4. Description of Securities.

Not Applicable.

Item 5. Interests of Named Experts and Counsel.

Not Applicable.

Item 6. Indemnification of Directors and Officers.

The Partnership does not have directors or officers. The officers and directors of the Partnership's general partner and its affiliates function as the officers and directors of the Partnership.

Section 17-108 of the Delaware Revised Uniform Limited Partnership Act empowers a Delaware limited partnership to indemnify and hold harmless any partner or other person from and against all claims and demands whatsoever. The Partnership's partnership agreement provides that the Partnership will indemnify (i) its general partner, (ii) any departing general partner, (iii) any person who is or was an affiliate of the general partner or any departing general partner, (iv) any person who is or was a member,

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partner, officer director, employee, agent or trustee of the general partner or any departing general partner or any affiliate of the general partner or any departing general partner or (v) any person who is or was serving at the request of the general partner or any departing general partner or any affiliate of any such person, any affiliate of the general partner or any fiduciary or trustee of another person (each, a “Partnership Indemnatee”), to the fullest extent permitted by law, from and against any and all losses, claims, damages, liabilities (joint or several), expenses (including, without limitation, legal fees and expenses), judgments, fines, penalties, interest, settlements and other amounts arising from any and all claims, demands, actions, suits or proceedings, whether civil, criminal, administrative or investigative, in which any Partnership Indemnatee may be involved, or is threatened to be involved, as a party or otherwise, by reason of its status as a Partnership Indemnatee; provided that in each case the Partnership Indemnatee acted in good faith and in a manner that such Partnership Indemnatee reasonably believed to be in or not opposed to the best interests of the Partnership and, with respect to any criminal proceeding, had no reasonable cause to believe its conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere, or its equivalent, shall not create an assumption that the Partnership Indemnatee acted in a manner contrary to that specified above. Any indemnification under these provisions will be only out of the assets of the Partnership, and the general partner shall not be personally liable for, or have any obligation to contribute or lend funds or assets to the Partnership to enable it to effectuate, such indemnification. The Partnership is authorized to purchase (or to reimburse the general partner or its affiliates for the cost of) insurance against liabilities asserted against and expenses incurred by such persons in connection with the Partnership’s activities, regardless of whether the Partnership would have the power to indemnify such person against such liabilities under the provisions of the Partnership’s partnership agreement.

Section 18-108 of the Delaware Limited Liability Company Act provides that, subject to such standards and restrictions, if any, as are set forth in its limited liability company agreement, a Delaware limited liability company may, and shall have the power to, indemnify and hold harmless any member or manager or other person from and against any and all claims and demands whatsoever. The limited liability company agreement of the general partner of the Partnership provides for the indemnification of (i) present or former members of the Board of Directors of the general partner or any committee thereof, (ii) present or former officers, employees, partners, agents or trustees of the general partner or (iii) persons serving at the request of the general partner in another entity in a similar capacity as that referred to in the immediately preceding clauses (i) or (ii) (each, a “General Partner Indemnatee”) to the fullest extent permitted by law, from and against any and all losses, claims, damages, liabilities, joint or several, expenses (including reasonable legal fees and expenses), judgments, fines, penalties, interest, settlements and other amounts arising from any and all claims, demands, actions, suits or proceedings, whether civil, criminal, administrative or investigative, in which any such person may be involved, or is threatened to be involved, as a party or otherwise, by reason of such person’s status as a General Partner Indemnatee; provided, that in each case, the General Partner Indemnatee acted in good faith and in a manner which such General Partner Indemnatee believed to be in, or not opposed to, the best interests of Enterprise Products Holdings LLC and, with respect to any criminal proceeding, had no reasonable cause to believe such General Partner Indemnatee’s conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere, or its equivalent, shall not create a presumption that the General Partner Indemnatee acted in a manner contrary to that specified above. Any indemnification pursuant to these provisions shall be made only out of the assets of the general partner. The general partner is authorized to purchase and maintain insurance, on behalf of the members of its Board of Directors, its officers and such other persons as the Board of Directors may determine, against any liability that may be asserted against or expense that may be incurred by such person in connection with the activities of the general partner, regardless of whether the general partner would have the power to indemnify such person against such liability under the provisions of its limited liability company agreement.

The general partner of the Partnership and its affiliates maintain liability insurance covering the officers and directors of the general partner against some liabilities, including certain liabilities under the Securities Act, that may be incurred by them.

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Item 7. Exemption from Registration Claimed.

Not Applicable.

Item 8. Exhibits.

The following documents are filed as a part of this registration statement or incorporated by reference herein:

Exhibit Number	Description
4.1	EPD Unit Purchase Plan.
5.1	Opinion of Andrews Kurth LLP as to the validity of the securities being registered.
23.1	Consent of Deloitte & Touche LLP.
23.2	Consent of Grant Thornton LLP.
23.3	Consent of Andrews Kurth LLP (included in Exhibit 5.1).
24.1	Power of Attorney (set forth in the signature page contained in Part II of this Registration Statement).

Item 9. Undertakings.

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, That paragraphs (a)(1)(i) and (a)(1)(ii) of this section do not apply if the registration statement is on Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of

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1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions described under Item 6 above, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Houston, State of Texas, on September 7, 2011.

ENTERPRISE PRODUCTS PARTNERS, L.P.

By: Enterprise Products Holdings LLC, its general partner

By: /s/ Michael J. Knesek

Michael J. Knesek
Senior Vice President, Controller and Principal
Accounting Officer of Enterprise Products Holdings LLC

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Michael A. Creel, Stephanie C. Hildebrandt and W. Randall Fowler and each of them, any of whom may act without joinder of the others, his or her lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any or all amendments (including post-effective amendments) to this registration statement and to file the same with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto such attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all said attorneys-in-fact and agents, and each of them, or the substitute or substitutes of any of them, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed below by the following persons in the capacities and on the dates indicated below.

<u>Signature</u>	<u>Title (within Enterprise Products Holdings LLC)</u>	<u>Date</u>
<u>/s/ Michael A. Creel</u> Michael A. Creel	Director, President and Chief Executive Officer (Principal Executive Officer)	September 7, 2011
<u>/s/ W. Randall Fowler</u> W. Randall Fowler	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	September 7, 2011
<u>/s/ A. James Teague</u> A. James Teague	Director, Executive Vice President and Chief Operating Officer	September 7, 2011
<u>/s/ Michael J. Knesek</u> Michael J. Knesek	Senior Vice President, Controller and Principal Accounting Officer	September 7, 2011
<u>E. William Barnett</u>	Director	September 7, 2011
<u>Charles M. Rampacek</u>	Director	September 7, 2011
<u>/s/ Rex C. Ross</u> Rex C. Ross	Director	September 7, 2011

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<u>Signature</u>	<u>Title (within Enterprise Products Holdings LLC)</u>	<u>Date</u>
<u>/s/ Randa Duncan Williams</u> Randa Duncan Williams	Director	September 7, 2011
<u>/s/ Dr. Ralph S. Cunningham</u> Dr. Ralph S. Cunningham	Director	September 7, 2011
<u>/s/ Richard H. Bachmann</u> Richard H. Bachmann	Director	September 7, 2011
<u>Thurmon M. Address</u>	Director	September 7, 2011
<u>Charles E. McMahan</u>	Director	September 7, 2011
<u>Edwin E. Smith</u>	Director	September 7, 2011

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EPD UNIT PURCHASE PLAN**(Amended and Restated — Formerly, DEP Unit Purchase Plan)**

Enterprise Products Company, a Texas corporation (the “Company”), hereby establishes the EPD Unit Purchase Plan (the “Plan”) by amending and restating the DEP Unit Purchase Plan (the “DEP Plan”), of which this Plan is the successor effective as of September 7, 2011. The DEP Plan was originally effective as of February 11, 2010 and was previously amended and restated as of July 19, 2011.

1. **Purpose.** The purpose of the Plan is to promote the interests of the Company and Enterprise Products Partners L.P., a Delaware limited partnership (the “Partnership”), by providing employees of the Company and its Affiliates (as defined below) a cost-effective program to enable them to acquire or increase their ownership of Units and to provide a means whereby such individuals may develop a sense of proprietorship and personal involvement in the development and financial success of the Partnership, and to encourage them to devote their best efforts to the business of the Partnership, thereby advancing the interests of the Partnership and the Company.

2. **Definitions.** As used in this Plan:

“Account” means a separate bookkeeping account maintained by the Employer or Custodian for a Participant.

“Affiliate” means, with respect to any person, any other person that directly or indirectly through one or more intermediaries controls, is controlled by or is under common control with, the person in question. As used herein, the term “control” means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person, whether through ownership of voting securities, by contract or otherwise.

“Board” means the Board of Directors of the Company.

“Committee” means a committee appointed by any Chairman, Group Chairman, Co-Chairman, Group Co-Chairman, Vice Chairman or Group Vice Chairman of the Company to administer the Plan.

“Company Blackout Period” means all periods during a year other than each period beginning on the second business day following a public announcement of the Partnership’s financial results for its most recently completed fiscal quarter and ending on the last day of the next subsequent fiscal quarter.

“Custodian” means the person engaged by the Company to perform administrative services for the Plan and to hold cash and Units, as provided in the services agreement with such person.

“DRIP” means the Enterprise Products Partners L.P. Distribution Reinvestment Plan.

“Eligible Compensation” means, with respect to an Eligible Employee, the sum of the following items of his/her compensation: salary, hourly wages, drivers’ regular pay, overtime pay, call-out pay, vacation pay, bonuses, sick pay, funeral pay, jury duty pay, holiday pay, and military or other leave of absence pay. No other items of compensation shall be considered.

“Eligible Employee” means any Employee who is classified by an Employer as a regular, active, full-time employee and whose regularly scheduled work week is at least 30 hours per week, but excluding (i) any such Employee covered by a collective bargaining agreement unless such bargaining agreement provides for his/her participation in the Plan, (ii) any temporary, project or leased employee or any nonresident alien and (iii) any Employee who owns interests or stock, as applicable, possessing 5 percent or more of the total combined voting power or value of all classes of equity interests in either the Partnership, the Company or any other Employer. If, while an Employee is an Eligible Employee, his/her employment status changes to “Inactive” or to “Leave of Absence”, the Employee will continue to be deemed an Eligible Employee until a subsequent change of employment status or assignment category results in failure to meet the above eligibility criteria.

“Employer” means any individual who is an employee of the Company or another Employer.

“Employee Discount Amount” means an amount, paid by the Employers each Purchase Period, equal to 10% of the quotient of (x) the total amount withheld from the Participants’ Eligible Compensation during such Purchase Period, divided by (y) 0.90.

“Employer” means the Company and any Affiliate the Committee has designated as a participating entity.

“Fair Market Value” means, with respect to Units purchased from the Partnership, the closing sales price of a Unit on the applicable purchase date (or if there is no trading in the Units on such date, on the next preceding date on which there was trading) as reported in The Wall Street Journal (or other reporting service approved by the Committee). In the event Units are not publicly traded at the time a determination of Fair Market Value is required to be made hereunder, the determination of Fair Market Value shall be made in good faith by the Committee.

“Participant” means an Eligible Employee or former Eligible Employee with an Account under the Plan.

“Plan Blackout Period” means a period established by the Committee during which a Restricted Participant may not engage in certain transactions under the Plan.

“Purchase Period” means, beginning September 7, 2011, a three-month period ending on the last day of each January, April, July and October, or such other periods as the Committee may establish.

“Restricted Participant” means an Employee who has the title of vice president or above with the Company or an Affiliate (regardless of where he/she is located) and each other Employee who is a Houston corporate office employee.

“Rule 16b-3” means Rule 16b-3 of the Securities and Exchange Commission (or any successor rule to the same effect) as in effect from time to time.

“Units” mean a limited partnership interest in the Partnership represented by Common Units as set forth in the Partnership Agreement.

3. Units Available Under Plan. Subject to adjustment as provided in this Section 3, a maximum of 440,879 Units may be delivered under the Plan. Units to be delivered under the Plan may be Units acquired by the Custodian in the open market or directly from the Partnership, the Employers or any other person, or any combination of the foregoing. In the event the Committee determines that any distribution, recapitalization, split, reverse split, reorganization, merger, consolidation, spin-off, combination, or exchange of Units or other securities of the Partnership, issuance of warrants or other rights to purchase Units or other securities of the Partnership, or other similar transaction or event affects the Units such that an adjustment in the maximum number of Units and/or the kind and number of securities deliverable under the Plan is appropriate in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan, then the Committee shall make appropriate adjustments to the maximum number of Units and/or the kind and number of securities deliverable under the Plan. The adjustments determined by the Committee shall be final, binding and conclusive.

4. Employee Elections. An Eligible Employee may purchase Units under this Plan upon the following terms and conditions:

(a) An Eligible Employee may enroll in the Plan on or after the first day of the month following the date on which he/she becomes an Eligible Employee, provided, however, that a person who becomes an Eligible Employee as the result of a business acquisition may enroll in the Plan on or after the date such person becomes an Eligible Employee. An Eligible Employee may elect to have his/her Employer withhold on an after-tax basis from his/her Eligible Compensation for each pay date occurring during a Purchase Period a designated whole percentage of his/her Eligible Compensation for such pay period ranging from 1% to 15% to be used for the purchase of Units hereunder. Subject to Section 4(f), an Eligible Employee may cancel or change (within the above limitations) his/her withholding election at any time. All Eligible Employee elections and any changes to an election shall be in such form as the Committee or its delegate may establish from time to time and, subject to Section 4(f), shall be effective as soon as administratively feasible after its receipt.

(b) Subject to Section 4(f), each withholding election made by an Eligible Employee hereunder shall be an ongoing election until the earlier of the date changed by the Eligible Employee, or the date the Eligible Employee ceases to be eligible to participate in the Plan. Eligible Employees may only make contributions through payroll deductions.

(c) The Employer shall maintain or cause to be maintained for each electing Eligible Employee a separate Account reflecting the aggregate amount of his/her Eligible Compensation that has been withheld and the Employee Discount Amount that have not yet been applied to the purchase of Units for such Eligible Employee. In addition, subject to the further provisions of the Plan, such Account shall be credited with the Units purchased for the Participant under the Plan, including any Units purchased on his/her behalf pursuant to the DRIP, if applicable, by the Custodian with cash distributions on Units held for the Participant by the Custodian. Amounts of Eligible Compensation withheld by the Employer shall not be segregated from the general assets of the Employer and shall not bear interest prior to being remitted to the Custodian. The Employer shall remit to the Custodian within a reasonable time after the end of each Purchase Period (i) all amounts of Eligible Compensation that have been withheld by the Employer and (ii) the Employee Discount Amounts that have not previously been remitted to the Custodian. The cash amounts remitted to the Custodian may, subject to the determination of the Committee, be invested by the Custodian as soon as reasonably practical in a money market fund approved by the Company until such amounts are used by the Custodian to purchase Units pursuant to the Plan. The interest or dividends earned, if any, on amounts invested in the money market fund shall be allocated by the Custodian to the Participants.

(d) If a Participant's contributions under the Plan stop during a Purchase Period due to the Participant ceasing to be an Eligible Employee (including upon a termination of employment or death), then all amounts of cash and Units held in his/her Account shall be processed as described in Section 8(b).

(e) If a Participant elects to stop his/her contributions under the Plan during a Purchase Period and continues as an Eligible Employee, then all amounts of cash allocated to his/her Account shall be applied to the purchase of Units on or following the end of that Purchase Period, as provided herein, unless the Participant ceases to be an Eligible Employee before the end of such Purchase Period, in which event Section 4(d) shall be applied to such Participant.

(f) Notwithstanding any provisions of the Plan to the contrary, Restricted Participants shall be subject to the following restrictions:

(i) no Units may be sold by or for the benefit of a Restricted Participant during a Company Blackout Period or a Plan Blackout Period;

(ii) a Restricted Participant may not join the Plan or increase his/her contribution percentage during a Plan Blackout Period; however, a Restricted Participant may join the DRIP during a Company Blackout Period or a Plan Blackout Period; and

(iii) if a Restricted Participant elects to withdraw from the Plan or decrease his/her contribution percentage, the Restricted Participant must wait three months before he/she can rejoin the Plan or increase his/her contribution percentage, as the case may be.

If the above three-month restricted period would expire with respect to a Restricted Participant during a Plan Blackout Period, such restricted period shall automatically continue with respect to such Restricted Participant until the end of that Plan Blackout Period.

5. Unit Purchases; DRIP Purchases; Purchase Price.

(a) As soon as reasonably practical following the end of each Purchase Period that begins on and after September 7, 2011, unless directed otherwise by the Company, the Custodian shall purchase directly from the Partnership that number of Units that can be acquired with the sum of (i) the total amount withheld from the Participants' Eligible Compensation during such Purchase Period, (ii) the Employee Discount Amount for such Purchase Period and (iii) any interest or dividends that may be received by the Custodian from a money market fund investment on the amounts remitted to the Custodian with respect to that Purchase Period. The purchase price paid to the Partnership for such Units shall be the Fair Market Value of the Units. If the Custodian is directed to purchase Units in the open market, the price of the Units allocated to each affected Participant for a Purchase Period shall be based on the weighted average of the purchase prices actually paid for the Units acquired for such Purchase Period.

(b) Cash distributions received by the Custodian with respect to Units it has purchased and is holding for a Participant pursuant to the Plan on or prior to the record date for such distributions shall be distributed to the Participant as soon as practicable unless the Participant directs the Custodian, in the manner prescribed by the Custodian, to "reinvest" such cash distribution in additional Units on behalf of such Participant pursuant to the DRIP. The price at which such cash distributions shall be reinvested shall be the price described in the DRIP.

6. Unit Purchase Allocations. The Units acquired under the Plan for a Purchase Period shall be allocated to Participants in proportion to (i) the sum of their contributions, the allocable Employee Discount Amount, and any interest or dividends credited to their Account for such Purchase Period, over (ii) the total of all such Plan amounts applied to the purchase of Units for the Purchase Period.

7. Plan Expenses. The Employer shall pay, other than from the Accounts, all brokerage fees for the purchase, but not the sale, of Units and all other costs and expenses of administering the Plan, including the fees of the Custodian. Any fees for the issuance and delivery of certificates to a Participant (or beneficiary) shall be paid by the Participant (or beneficiary). Participants shall be responsible for, and shall pay, any brokerage fees and other costs and expenses incurred by the Custodian in connection with the sale of such Participant's Units and the expedited delivery of proceeds or other documents to such Participant.

8. Sale or Delivery of Units to Participants. Except as provided below, Units purchased under the Plan shall be held by the Custodian:

(a) Subject to Section 4(f), a Participant who is an Employee may elect at any time to have the Custodian (i) sell such Units and deliver the proceeds to the

Participant, (ii) transfer the Units to a brokerage account, or (iii) transfer the Units to a registered book-entry shareholder account with Wells Fargo Bank, N.A., the Partnership's transfer agent, all as soon as practical.

(b) Subject to Section 4(f), if a Participant ceases to be an Eligible Employee, then as soon as administratively feasible, all Units allocated to his/her Account shall automatically be transferred to a registered book-entry shareholder account in his/her name (or his/her beneficiary's name) with Wells Fargo Bank, N.A. unless the Participant (or his/her beneficiary) elects, within the period provided by the Committee, for such Units to be either (i) sold by the Custodian and the proceeds delivered to the Participant (or his/her beneficiary) or (ii) transferred to a brokerage account. However, in all events, fractional Units shall be sold and the proceeds, along with any other cash in his/her account, shall be distributed to the Participant (or his/her beneficiary). If a Purchase Date is imminent and it is not administratively feasible to distribute the cash in the Account before such Purchase Date, then the cash shall be used to purchase Units, and the Units shall subsequently be transferred or sold as described above.

9. No Delivery of Fractional Units; Custodian. Notwithstanding any other provision contained herein, the Employer or Custodian will not be required to deliver any fractional Units to an Employee pursuant to this Plan, although an Employee's Account may be credited with a fractional Unit for record keeping purposes. The Company may enter into a service agreement with a Custodian that provides for the Custodian to hold on behalf of the Participants the cash contributions, the Units acquired under the Plan and distributions on such Units, provided such agreement permits a Participant to direct the Custodian to either sell or transfer such Units to a brokerage account, subject to the limitations in Section 4(f).

10. Withholding of Taxes. To the extent that the Employer is required to withhold any taxes in connection with an Eligible Employee's contributions or the Employee Discount Amount, it will be a condition to the receipt of such Units that the Eligible Employee make arrangements satisfactory to the Employer for the payment of such taxes, which may include a reduction in, or a withholding from, the Eligible Employee's Account, total compensation or salary or reimbursement by the Eligible Employee, as the case may be.

11. Rule 16b-3 Compliance. It is intended that any purchases by an Employee subject to Section 16 of the Securities and Exchange Act of 1934 meet all of the requirements of Rule 16b-3. If any action or procedure under the Plan would otherwise not comply with Rule 16b-3, such action or procedure shall be deemed modified from inception, to the extent the Committee deems practicable, to conform to Rule 16b-3.

12. Investment Representation. Unless the Units subject to purchase under the Plan have been registered under the Securities Act of 1933, as amended (the "1933 Act"), and, in the case of any Eligible Employee who may be deemed an affiliate (for securities law purposes) of the Company or the Partnership, such Units have been registered under the 1933 Act for resale by such Participant, or the Partnership has determined that an exemption from registration is available, the Employer may require prior to and as a condition of the delivery of any Units that the person purchasing such Units hereunder furnish the Employer with a written representation

in a form prescribed by the Committee to the effect that such person is acquiring such Units solely with a view to investment for his or her own account and not with a view to the resale or distribution of all or any part thereof, and that such person will not dispose of any of such Units otherwise than in accordance with the provisions of Rule 144 under the 1933 Act unless and until either the Units are registered under the 1933 Act or the Employer is satisfied that an exemption from such registration is available.

13. Compliance with Securities Laws. Notwithstanding anything herein or in any other agreement to the contrary, the Partnership shall not be obligated to sell or issue any Units to an Employee under the Plan unless and until the Partnership is satisfied that such sale or issuance complies with (i) all applicable requirements of the securities exchange on which the Units are traded (or the governing body of the principal market in which such Units are traded, if such Units are not then listed on an exchange), (ii) all applicable provisions of the 1933 Act, and (iii) all other laws or regulations by which the Partnership is bound or to which the Partnership is subject. The Company acknowledges that, as the holder of a majority of the member interest in the general partner of the Partnership, it is an affiliate of the Partnership under securities laws and it shall comply with such laws and obligations of the Partnership relating thereto as if they were directly applicable to the Company.

14. Administration of the Plan.

(a) This Plan will be administered by the Committee. A majority of the Committee will constitute a quorum, and the action of the members of the Committee present at any meeting at which a quorum is present, or acts approved in writing by a majority of the Committee members, will be the acts of the Committee.

(b) Subject to the terms of the Plan and applicable law, the Committee shall have the sole power, authority and discretion to: (i) determine which persons are Eligible Employees who may participate; (ii) determine the number of Units to be purchased by a Participant; (iii) determine the time and manner for purchasing Units; (iv) interpret, construe and administer the Plan, including without limitation determining the Blackout Periods and which Participants are Restricted Participants; (v) establish, amend, suspend, or waive such rules and regulations and appoint such agents as it shall deem appropriate for the proper administration of the Plan; (vi) make a determination as to the right of any person to receive Units under the Plan; and (vii) make any other determinations and take any other actions that the Committee deems necessary or desirable for the administration of the Plan.

(c) The Committee may correct any defect, supply any omission, or reconcile any inconsistency in the Plan in the manner and to the extent it shall deem desirable in the establishment or administration of the Plan.

(d) No member of the Committee shall be liable for any action, omission, determination or interpretation made in good faith, and the Company and the Partnership shall, in addition to any other rights of such persons, hold harmless such persons with respect to any such action, omission, determination or interpretation.

15. Amendments, Termination, Etc.

(a) This Plan may be amended from time to time by the Board, or any Chairman, Group Chairman, Co-Chairman, Group Co-Chairman, Vice Chairman or Group Vice Chairman of the Company, subject to unitholder approval to the extent required by applicable law or the requirements of the principal exchange in which the Units are listed. In addition, the Chief Executive Officer, the President or the Senior Vice President of Human Resources of the Company may, subject to unitholder approval to the extent required by applicable law or the requirements of the principal exchange in which the Units are listed, and after consultation with the Company's General Counsel, Chief Legal Officer or Deputy or Assistant General Counsel with respect to such matters, make any amendments to the Plan that do not (i) increase the number of authorized Units, (ii) increase the Employee Discount Amount or (iii) otherwise materially increase the Company's or the Partnership's obligations under the Plan; *provided*, the failure of any such authorized officer to make such consultation shall not affect the validity of any such amendments to the Plan.

(b) This Plan will not confer upon any Employee any right with respect to continuance of employment or other service with the Company or any Affiliate, nor will it interfere in any way with any right the Company or an Affiliate would otherwise have to terminate such Employee's employment or other service at any time.

(c) This Plan may be suspended or terminated at any time by the Board, or any Chairman, Group Chairman, Co-Chairman, Group Co-Chairman, Vice Chairman or Group Vice Chairman of the Company. On termination of the Plan, all amounts then remaining credited to the Accounts for Employees shall be returned to the affected Employees.

(d) A Participant may not assign, pledge, encumber or hypothecate in any manner his/her interest in the Plan, including his/her Account.

16. Governing Law. The validity, construction and effect of the Plan and any rules and regulations relating to the Plan shall be determined in accordance with applicable Federal law, and to the extent not preempted thereby, with the laws of the State of Delaware.

17. Term of the Plan; Unitholder Approval. The Plan, as hereby amended and restated, shall continue until the earliest of (i) all available Units under the Plan have been delivered to Participants, (ii) the termination of the Plan by action of the Board, or any Chairman, Group Chairman, Co-Chairman, Group Co-Chairman, Vice Chairman or Group Vice Chairman of the Company or (iii) the 10th anniversary of the date of the initial approval of this Plan by the unitholders of Duncan Energy Partners L.P., a Delaware limited partnership ("DEP") and the predecessor to the Partnership under the DEP Plan prior to its amendment and restatement hereby.

Amended and Restated effective: September 7, 2011

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Houston, Texas 77002
713.220.4200 Phone
713.220.4285 Fax
andrewskurth.com

September 7, 2011

Enterprise Products Partners L.P.
1100 Louisiana, 10th Floor
Houston, Texas 77002

Ladies and Gentlemen:

We have acted as special counsel to Enterprise Products Partners L.P., a Delaware limited partnership (the "Partnership"), in connection with the preparation of the registration statement on Form S-8 (the "Registration Statement") to be filed with the Securities and Exchange Commission (the "Commission") in connection with the registration by the Partnership under the Securities Act of 1933, as amended (the "Securities Act"), of the sale of up to 440,879 common units (the "Units") representing limited partner interests in the Partnership (the "Common Units") which may be issued pursuant to the EPD Unit Purchase Plan (formerly the DEP Unit Purchase Plan) (the "Plan").

As the basis for the opinion hereinafter expressed, we have examined and relied on originals or copies, certified or otherwise identified to our satisfaction, of the following: (i) the Certificate of Limited Partnership of the Partnership; (ii) the Sixth Amended and Restated Agreement of Limited Partnership of the Partnership, as amended (the "Partnership Agreement"); (iii) the Certificate of Formation of Enterprise Products Holdings LLC (formerly named EPE Holdings, LLC), a Delaware limited liability company and the general partner of the Partnership (the "General Partner"); (iv) the Fifth Amended and Restated Limited Liability Company Agreement of the General Partner, as amended (the "LLC Agreement"); (v) the Plan; (vi) the Registration Statement; and (vii) such other instruments and other certificates of public officials, officers and representatives of the Partnership and such other persons as we have deemed appropriate as a basis for the opinions set forth herein.

In rendering the opinions expressed below, we have assumed and have not verified (i) the genuineness of the signatures on all documents that we have examined, (ii) the legal capacity of all natural persons, (iii) the authenticity of all documents supplied to us as originals and (iv) the conformity to the authentic originals of all documents supplied to us as certified, photostatic or faxed copies. In conducting our examination of documents, we have assumed the power, corporate or other, of all parties thereto other than the Partnership to enter into and perform all obligations thereunder and have also assumed the due authorization by all requisite action, corporate or other, and the due execution and delivery by such parties of such documents and that, except as set forth in the numbered opening paragraphs below, to the extent such documents purport to constitute agreements, such documents constitute valid and binding obligations of such parties.

We have also assumed that (A) the Certificate of Limited Partnership of the Partnership and the Partnership Agreement and the Certificate of Formation of the General Partner and the LLC Agreement, in each case as amended to date, will not have been amended in any manner that would affect any legal conclusion set forth herein, and (B) all Units will be issued and sold in the manner described in the prospectus related to the Plan and in accordance with the terms of the Plan.

Based upon the foregoing, and subject to the limitations and assumptions set forth herein, and having due regard for such legal considerations as we deem relevant, we are of the opinion that:

1. The issuance of the Units by the Partnership has been duly authorized by the General Partner.
 2. Upon the issuance and delivery of the Units from time to time in accordance with the terms of the Plan for the consideration established by the Plan and the satisfaction of any performance conditions associated
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therewith and any requisite determinations by or pursuant to the authority of the Board of Directors of the General Partner or a duly constituted and acting committee thereof as provided in the Plan, such Units will be validly issued, fully paid (to the extent required under the Partnership Agreement) and non-assessable, except as such non-assessability may be affected by (i) the matters described in the Partnership's Annual Report on Form 10-K for the year ended December 31, 2010 under the captions "Risk Factors — Risks Related to Our Partnership Structure — Our common unitholders may not have limited liability if a court finds that limited partner actions constitute control of our business" and "— Unitholders may have liability to repay distributions" and (ii) Sections 17-303, 17-607 and 17-804 of the Delaware Revised Uniform Limited Partnership Act, as amended (the "*Delaware LP Act*").

We express no opinion other than as to the Delaware LP Act (which is deemed to include the applicable provisions of the Delaware Constitution and reported judicial opinions interpreting those laws) and the federal laws of the United States of America, and we are expressing no opinion as to the effect of the laws of any other jurisdiction, domestic or foreign.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement. In giving this consent we do not admit that we are "experts" under the Securities Act, or the rules and regulations of the Commission thereunder, with respect to any part of the Registration Statement, including this exhibit. This opinion is expressed as of the date hereof, and we disclaim any undertaking to advise you of any subsequent changes of the facts stated or assumed herein or any subsequent changes in applicable law, and we have assumed that at no future time would any such subsequent change of fact or law affect adversely our ability to render at such time an opinion (a) containing the same legal conclusions set forth herein and (b) subject only to such (or fewer) assumptions, limitations and qualifications as are contained herein.

Very truly yours,

/s/ ANDREWS KURTH LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our reports dated March 1, 2011, relating to the consolidated financial statements of Enterprise Products Partners L.P. and subsidiaries (which report expresses an unqualified opinion and includes an explanatory paragraph concerning the effect of the merger with Enterprise GP Holdings L.P. on November 22, 2010) and the effectiveness of Enterprise Products Partners L.P.'s internal control over financial reporting, appearing in the Annual Report on Form 10-K of Enterprise Products Partners L.P. for the year ended December 31, 2010.

/s/ Deloitte & Touche LLP

Houston, Texas

September 6, 2011

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our report dated February 24, 2010 with respect to the consolidated financial statements of Energy Transfer Equity, L.P. and subsidiaries as of December 31, 2009 and for each of the two years in the period ended December 31, 2009, included in the Annual Report on Form 10-K for the year ended December 31, 2010 of Enterprise Products Partners L.P., which is incorporated by reference in this Registration Statement. We consent to the incorporation by reference in the Registration Statement of the aforementioned report.

/s/ GRANT THORNTON LLP

Tulsa, Oklahoma
September 6, 2011